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Finding the right mix: How the composition of self-managing multicultural teams' cultural value orientation influences performance over time

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Summary

This research investigates a new type of team that is becoming prevalent in global work settings, namely self-managing multicultural teams. We argue that challenges that arise from cultural diversity in teams are exacerbated when teams are leaderless, undermining performance. A longitudinal study of multicultural master of business administration study teams found that in the early stage of team formation, teams with a low average level of, but moderate degree of variance in, uncertainty avoidance performed best. Four months post formation, however, teams with a high average level of relationship orientation performed better than teams with a low average level of relationship orientation. Furthermore, a moderate degree of variance in relationship orientation among team members produced better team performance than a low or high degree of variance. These findings suggest that different cultural value orientations exert different patterns of effects on the performance of self-managing multicultural teams, depending on the stage of team formation. We discuss implications for the composition of self-managing multicultural teams and its influence on team processes and performance.

Introduction

To accommodate the accelerating pace of globalization, work teams have become compositionally diverse, with individuals from different cultural backgrounds working closely alongside one another (Adler, 1997; Hofstede, 1997; Maddox, 1993). Moreover, with the greater complexity of, and unpredictability in, the global environment constantly demanding nimble responses to urgent problems that are neither well structured nor defined, organizations are structuring teams to be less hierarchical and more self-directing (Hackman, 1976; Manz & Sims, 1993; Wellins et al., 1990).

For example, in the wake of the recent earthquake and tsunami in Japan, rescue professionals from different countries had to come together quickly to fulfill critical rescue missions. These international teams, which possessed different professional capacities, did not have the luxury of negotiating clear formal leadership before undertaking time-critical, life-saving tasks at ground zero. In the corporate setting, global advertising firms' creative teams are often culturally diverse because they need to address a global consumer base. Yet, by virtue of their work as well as the fact that different members possess unique knowledge, expertise, and connections in specific markets, creative teams often do not have

formal leadership. In fact, close supervision and direction can hamper the efficiency of decision-making and timely delivery of marketing plans, not to mention incur the risk of stifling creativity. In their quest to be inclusive of diverse cultures and to draw on diverse cultural knowledge to provide timely, practical solutions to fulfill consumer demands the world over, companies such as Capital One Bank and General Electric/Durham are also resorting to self-managing multicultural teams (Zawodny, 2006). The self-managing multicultural team format is therefore clearly a new trend for dealing with the demands of globalization and increasing interconnectivity between cultures. However, without formal leadership and shared cultural norms to guide members' behaviors, how can self-managing multicultural teams achieve the coordination required for team effectiveness?

Despite ongoing research on multicultural (e.g., Brett, Behfar, & Kern, 2006; Dahlin, Weingart, & Hinds, 2005; Earley & Mosakowski, 2000) and self-managing (e.g., Cohen & Ledford, 1994; Hackman, 1986; Kirkman & Shapiro, 1997; Pearce & Ravlin, 1987) teams, theoretical proposals and empirical research on the combination of these phenomena remain limited.[11] Because of the interdependent nature of teamwork, one major challenge that all kinds of teams face is coordination among members (Brannick, Prince, Prince, & Salas, 1965; Van de Ven, Delbecq, & Koening, 1976). Within-team coordination can be achieved if objectives, knowledge, behaviors of team members are well-aligned (Rico, Sanchez-Manzanares, Gil, & Gibson, 2008). A key mechanism of team coordination is planning and communication among team members (March & Simon, 1958). How do teams differing in cultural composition and the existence of formal leaders achieve coordination? Coordination in mono-cultural teams with clear leadership can be guided by the norms or team structure provided by the team leader (Zaccaro, Rittman, & Marks, 2001) as well as those imposed from team members' shared cultural norms and practices (Klimoski & Mohammed, 2002). Mono-cultural self-managing teams can rely on the norms and structure imposed by the members' shared cultural practices to achieve coordination even when formal leadership is absent (Druskat & Pescosolido, 2002). Multicultural teams with clear formal leadership benefit from leaders who are knowledgeable and skillful in handling cultural differences to come up with team norms and structure that can facilitate cross-cultural communication and coordination (Dickson, Den Hartog, & Mitchelson, 2003). But what can multicultural self-managing teams rely on to build team norms and structure for team coordination when there are neither shared cultural norms for the team members to fall back on nor formal leadership to provide structure and guidance in communication? The unique team format created by combining cultural diversity and self-management poses a challenge in that self-management complicates how culturally different members engage one another in team coordination. Although cultural diversity in teams provides advantages such as access to diverse ideas and perspectives, enhancing teams' creativity (Ely & Thomas, 2001; Watson, Kumar, & Michaelsen, 1993) and cultural diversity also introduces many barriers to team effectiveness. Differences in cultural value orientation can complicate communication and intensify interpersonal conflicts, jeopardizing team effectiveness (Polzer, Milton, & Swann, 2002). For example, team members might be hesitant to share knowledge and ideas with members of different cultural backgrounds because of lack of rapport and trust. Conflicts might also take on cultural undertones, rendering it difficult for the team to build cohesion. Team leaders are expected to devise solutions to these challenges (Makilouko, 2004), such as diffusing tensions in intercultural communication to facilitate collaboration and improve team performance (Maznevski & DiStefano, 2000). Because self-managing multicultural teams have no clear formal leadership to supervise their work processes, many of the challenges related to multicultural interactions are likely to be inadequately resolved. Given that prescriptions and theories from the independent

[1] Although Kirkman and Shapiro (1997, 2001a, 2001b) studied globalized self-managing teams, they focused on the effectiveness of self-managing teams in different cultural contexts as opposed to teams composed of multicultural members.

research streams on self-managing and multicultural teams do not consider the confluence of multiculturalism and self-direction, we know little about how self-managing multicultural teams can be designed to be more effective.

This research aims to better understand the circumstances that underlie the effectiveness of self-managing multicultural teams as they develop over time. We focus on the composition of cultural value diversity, theorizing that specific compositions of cultural value orientations at different stages of team development can compensate the lack of formal leadership. Specifically, we examine how average level and degree of variance in the composition of self-managing multicultural teams' cultural value orientations interact to affect team performance over time. Departing from prior cultural diversity research, in which cultural values are measured mostly in terms of team members' personal value endorsement, we conceptualize cultural value orientation as consensual perceptions of cultures shared in a cultural group as suggested by recent developments in cultural psychology research (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010; Zou et al., 2009). We propose that certain compositions of cultural value orientation thus conceptualized can compensate for the functions usually performed by team leaders and thereby enhance the performance of self-managing teams, the specific effects depending on the stage of team development.

At the stage of initial team formation, the pressing challenge for multicultural teams is to deal with the high uncertainty and anxiety faced by team members from diverse cultural backgrounds as well as the anticipated anxiety of attending to new and sometimes ill-structured tasks. Typically, this is the job of the team leader. When there is no formal leader to buffer or assuage uncertainty and anxiety among members of self-managing multicultural teams, uncertainty avoidance, that is, a low degree of preference for flexibility and ambiguity, would likely exert a significant effect on team performance. Better performance would be observed for teams with low as opposed to high average levels of uncertainty avoidance. This is because a low uncertainty avoidance team orientation enables members to better cope with the uncertainties and chaos associated with working with unfamiliar individuals from other cultures. We also expect an inverted U-shaped relationship between the degree of variance in members' uncertainty avoidance and team performance. A certain degree of variance is needed to realize the benefits of cultural diversity, but too much variance can threaten cohesion and collaboration (Williams & O'Reilly, 1998). Combining the effects regarding average level and degree of variance of team uncertainty avoidance, we further predict that the positive impact of low average uncertainty avoidance on team performance is accentuated when variance among team members' cultural value orientation is moderate.

When members have overcome the initial challenges occasioned by cultural differences, teams' average level of relationship orientation, or greater emphasis on relationships and lesser emphasis on competitiveness, begins to play a larger role than uncertainty avoidance. The major challenge for teams shifts from dealing with early-stage interpersonal uncertainty and anxiety caused by team members' cultural differences to realizing, in the later stages of team development, the benefits of the multicultural resources they provide. A high level of relationship orientation can compensate for the absence of a formal team leader to foster cohesion and coordinate information and idea sharing. The higher a leaderless team's relationship orientation, the more effective the team would be at sharing ideas and information. The fluid flow of information and ideas is especially important for the effectiveness of multicultural teams because intercultural tension often constitutes a key barrier to information and knowledge sharing. Returning to our global advertising firm example, we might expect members of a creative team to be hesitant to share new ideas that they believed culturally different others on the team might be unreceptive to. We further predict an inverted U-shaped relationship between the degree of

variance in members' relationship orientation and team performance. We expect better performance at a moderate level of variance: high variance in members' relationship orientation undermines team cohesion (Williams & O'Reilly, 1998), and low variance elevates the risk of groupthink whereby members think similarly and make decisions without dissent. Again, we expect the effects of average level and degree of variance in relationship orientation to combine such that the positive effect of high average relationship orientation on team performance is accentuated when variance among team members in this cultural value orientation is moderate.

This research makes both theoretical and practical contributions. On the theoretical front, we are studying an emerging form of team increasingly common in global organizations and international work, that is, multicultural teams that are self-managing. Neither the multicultural nor self-managing team literatures have examined this type of teams so far. Our work is thus the first research to advance theoretical predictions regarding the influence of the composition of self-managing multicultural teams on team performance. Our work also sheds light on the debate over the effects of diversity on team performance, such as whether diversity exerts a positive or negative impact on team effectiveness (Stahl, Maznevski, Voigt, & Jonsen, 2010). On the practical front, our work helps managers understand the formation and management of self-managing multicultural teams as well as other types of teams that might share similar characteristics. In the following sections, we first develop theoretical arguments underlying our hypotheses. We then test our hypotheses with data collected from master of business administration (MBA) study teams, measuring team performance at two distinct times during the team-development process.

Theory Development

Individuals' cultural value orientations influence not only the way they interpret and process information (Adler, 1997; Hofstede, 1980) but also their preferred patterns of social interaction and engagement with others (Bettenhausen & Murnighan, 1991; Earley, 1993; Zander, 1997). When individuals from different cultural backgrounds come together in a multicultural team, the confluence of different cultural perspectives offers great potential for high team performance. But positive results are not always realized. Various teams and cross-cultural researchers have argued that cultural diversity in teams presents obstacles that need to be carefully managed or overcome (see Stahl et al., 2010 for a review). Empirical evidence thus far reveals an equivocal relationship between cultural diversity and team performance; some researchers finding positive (e.g., Earley & Mosakowski, 2000; Thomas, Ravlin, & Wallace, 1996), others negative (e.g., Jehn & Mannix, 2001; Kirkman, Tesluk, & Rosen, 2004), associations between cultural diversity and performance. A consensus that emerges from these contradictory findings is that cultural diversity tends to increase divergent and decrease convergent team processes (Stahl et al., 2010). Divergent processes bring diverse values and ideas into a team, leading to positive outcomes such as higher creativity and negative outcomes such as greater interpersonal conflict and uncertainty. Convergent processes align a team around common objectives, commitment, or conclusions that lead to positive outcomes such as enhanced communication and group cohesion and negative outcomes such as groupthink. We might observe different relationships between cultural diversity and team performance depending on which set of processes is operative.

Another source of the equivocal relationship between cultural diversity and team performance derives from the different ways cultural diversity has been defined, which could be categorized into "surface-level" or "deep-level" (e.g., Harrison, Price, & Bell, 1998; Stahl et al., 2010; Wheeler, 2002). Surface-level cultural diversity encompasses variations in demographic markers such as ethnicity or nationality

(Jackson, May, & Whitney, 1995; Williams & O'Reilly, 1998), whereas deep-level cultural diversity involves differences in cultural attitudes, norms, and values (Jackson, Joshi, & Erhardt, 2003). Although most research thus far has focused on examining surface-level forms of cultural diversity (Oerlemans & Peeters, 2010), a growing body of research reports significant impact of deep-level forms of cultural diversity on work outcomes (Harrison et al., 1998; Harrison, Price, Gavin, & Florey, 2002; Vodosek, 2007). A recent meta-analysis of the impact of culture shows the influence of cultural values endorsed by team members to be strongest for emotional outcomes, followed by attitudes, behaviors, and, finally, performance, which has a small effect size (Taras, Kirkman, & Steel, 2010). Cross-cultural research, in contrast, shows inter-subjective perceptions, that is, shared perceptions of cultural practices including cultural beliefs, values, and behaviors perceived to be widespread and accepted by those in a cultural group, to be more predictive of the behavior of people in a specific culture than personal endorsement of their cultural practices (Chiu et al., 2010; Zou, et al., 2009).

Building on these prior theories of cultural psychology and team processes, this research investigates the effects of team composition defined by cultural value orientations, a deep-level form of cultural diversity, on the effectiveness of self-managing multicultural teams. We argue that in the absence of formal leadership, the negative effects of cultural diversity (e.g., uncertainty and conflict) will outweigh the corresponding positive effects (e.g., more divergent thinking and less groupthink). We propose that specific compositions of cultural value orientations can compensate for the negative effects of the absence of formal leadership on the performance of self-managing multicultural teams.

Our research departs from prior research on cultural diversity in teams in two ways. The first is that we examine, rather than individuals' private cultural value orientation, the effect of group members' inter-subjective perceptions of cultures, that is, group members' perceptions of what is consensually believed in their respective cultures about team performance. We base this approach on findings from recent social psychological research that demonstrates that the effects of culture on behavior and cognition depend more on consensual perceptions of cultures than on individuals' cultural value endorsement (Chiu et al., 2010; Zou et al., 2009). This new research conceptualizes culture as shared knowledge and posits that day-to-day communication and interaction among its members give rise to implicit perceptions about the values that are important and pervasive in a culture. These consensual cultural perceptions, in turn, drive cognition and behavior, in part, because members of a society rely on shared meanings to help them interpret and make sense of their environment (e.g., Cialdini & Trost, 1998; Jetten, Postmes, & McAuliffe, 2002; Moscovici, 1976).

The second way in which our research departs from prior research on cultural diversity in teams is that we consider both the stages of team formation and the types of cultural value orientation. We argue that the effects of specific cultural value orientations on multicultural teams' performance depend on the stage of team formation. We use Hofstede's (1980) four cultural dimensions—uncertainty avoidance, relationship orientation (also known as masculinity–femininity), individualism–collectivism, and power distance—as our basic orienting framework and assume that members of different cultures will embody different combinations of these four key dimensions of culture. Because Hofstede's culture dimensions reflect societal (country) level value orientations, using these dimensions dovetails with our conceptualization of culture as the consensual beliefs of a collective (Chiu et al., 2010; Zou et al., 2009). We further propose that, of the four key cultural value orientations identified by Hofstede (1980), uncertainty avoidance and relationship orientation play critical roles at the beginning and later stages of formation of self-managing, multicultural teams at which the challenges are different.

Early stages of team formation

When team members with different cultural backgrounds meet one another for the first time to exchange information and decide on overall team goals, the focus is initially on avoiding conflicts and promoting interpersonal harmony, mutual acceptance, and trust. Unfamiliarity with other cultures, however, renders inter-cultural interaction inherently uncomfortable and anxiety-generating for many (Stephan, Helms, & Haynes, 1995; Stephan & Stephan, 1985). Indeed, recent research by Jiang, Chua, Kotabe, and Murray (2011) found that intercultural trust is especially difficult to build. Moreover, differences in opinions, perspectives, and ideas regarding how work should be performed would inevitably surface as a team begins to work on its first task; these differences are exacerbated by cultural differences. With no formal team leader to coordinate communication, this process can be highly uncomfortable, increasing levels of anxiety, uncertainty, and conflict among team members. These intra-team dynamics generally correspond to the forming and storming stages of Tuckman's (1965) classic team development model.

It is helpful at this early stage of formation if most members of a self-managing multicultural team come from cultures with a low level of uncertainty avoidance, described by Hofstede (1980) as a culture's tolerance toward ambiguity and uncertainty. According to Hofstede (2001), uncertainty avoidance deals with a society's tolerance for uncertainty and ambiguity. Specifically, it indicates the extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations such as situations that are novel, unknown, surprising, and different from usual. Individuals from high uncertainty avoidance cultures try to minimize the occurrence of such situations by creating strict laws and rules, safety and security measures, as well as upholding beliefs of an absolute truth. As a result, members from cultures with low uncertainty avoidance tend to be more comfortable in the absence of clear structures and a formal leader to facilitate communication, collaboration, and moderate cultural differences and conflicts. Such individuals are better able to meet the demands of interdependence, coordination, and trust among culturally different team members in self-managing teams (Cohen, Ledford, & Spreitzer, 1996). Additionally, members from low uncertainty avoidance cultures are likely to be more willing to exchange ideas, more open to other members' opinions, and more ready to adjust their positions as well as their cultural habits to try out new ideas (Wennekers, 2006). These individuals are better able than those from high uncertainty avoidance cultures to cope with the anxiety and interpersonal challenges generated by ambiguous situations involving diverse ideas and unfamiliar team members from other cultural backgrounds (Burke, Pierce, & Salas, 2006). Hence, if a team's average level of uncertainty avoidance is low, the team as a whole should be adept at coping with cultural differences and able to deliver superior performance.

Hypothesis 1. At the initial stage of team formation, the lower a self-managing multicultural team's average level of uncertainty avoidance, the better its performance.

Of course, members of a multicultural team are being unlikely to come from cultures with the same degree of uncertainty avoidance; we expect some variance in their uncertainty avoidance orientation. The more members from cultures with a low uncertainty avoidance orientation, the more homogenously low a team's uncertainty avoidance. But although a high level of homogeneity in low uncertainty avoidance can buffer members from the discomfort and anxiety associated with inter-cultural interactions and conflicts in self-managing, multicultural teams, it does not provide the requisite diversity of viewpoints that is

valuable for idea exchange and creativity in team decision making (Ashby, 1956; West, 2000). Uncertainty avoidance has been found to be a cultural value orientation that is strongly associated with the personal attitude of risk aversion (Wennekers, Thurik, van Stel, & Noorderhaven, 2007). Research shows that a low uncertainty avoidance orientation is positively associated to innovation in teams because of higher tendencies of risk taking (Shane, 1995). However, individuals low on uncertainty avoidance, because of their greater tolerance of risks, are more likely to enter into unknown ventures (Hofstede, 2001), which might lead to over risky decision making. Further, individuals low on uncertainty avoidance have less need for structure in their groups and thus care less about making team work clearly interpretable and predictable (Hofstede, 2001). These tendencies might lead to insufficient reality check, resulting in difficulties for teams to complete their work in time. Prior research shows that the combination of high risk-taking tendencies and high levels of cultural diversity has the most negative influence on firm performance (Richard, Barnett, Dwyer, & Chadwick, 2004).

In contrast, when within-team variance in uncertainty avoidance is high, factions emerge. Maximum separation of team members' values and attitudes occurs when a team is split into two extreme and opposing factions (Harrison & Klein, 2007). Even under somewhat less extreme conditions, the emergence of factions can aggravate intra-team conflicts and disputes (Gibson & Vermeulen, 2003, p. 203), which can be extremely challenging for teams without formal leadership, especially during the initial stages of team formation. Earley and Mosakowski (2000) reported that moderate variance in superficial levels of cultural diversity, such as nationality, engenders the highest fractioning because of status hierarchy, social categorization, and group fault lines. However, we are convinced that deep levels of cultural diversity, such as cultural value orientation, which are less tangible and more difficult to categorize, dominate individuals' cognition, attitude, and behavior when the team structure is not predetermined and a lot more coordination needs to be done such as in self-managing multicultural teams. Thus, higher variance in value heterogeneity will lead to fractioning or fragmentation. Hence, we argue that better team performance will accrue to a moderate, than to a high or low, degree of variance in uncertainty avoidance.

Hypothesis 2. There is an inverted-U curvilinear relationship between the degree of variance among team members' uncertainty avoidance and team performance such that team performance will be higher at a moderate, than at a low or high, degree of variance.

We combine our predictions in H1a and H1b to further predict that under the circumstance of teams with a low average level of uncertainty avoidance and distribution of members from low uncertainty avoidance culture that is neither overly homogeneous nor polarized into opposing factions, performance is likely to be further enhanced. Put differently, although a low team-level uncertainty avoidance will generally have a positive effect on performance at an early stage of team development, a sufficient degree of variance in this dimension is necessary for a team to tap the benefits of cultural diversity.

Hypothesis 3. There is an interaction between a self-managing multicultural team's average level of uncertainty avoidance and the degree of variance among team members such that the performance of a team with a low average level of uncertainty avoidance is enhanced by a moderate degree of variance among members.

Later stages of team formation

At a later stage of team formation, cultural differences notwithstanding, members of a multicultural team will have become better acquainted through social and work-related interactions. The team will have developed habits and norms, including agreed-upon implicit and explicit rules and protocols, for getting the work done. Team members will also have begun to develop a certain degree of trust in one another. When these team-building processes are effectively in place, a stage of high performance may ensue with the team beginning to function as a coherent unit working to achieve the goals and objectives set for it. These team dynamics correspond to the norming and performing stages of team development described by Tuckman (1965).

We argue that the effects of uncertainty avoidance become less important at these stages of team formation given team members' greater degree of familiarity with one another and consequent significant reduction in the initial anxiety they felt. The key cultural value orientation that will influence performance shifts to relationship orientation, also known as the masculinity–femininity dimension, in the Hofstede (1980) framework. The masculinity–femininity dimension refers to the emphasis a culture places on traditionally male or female values, as understood from a Western perspective. Male values emphasize assertiveness and competitiveness, whereas female values emphasize interpersonal care and concern, harmony, and relationships. Members from high relationship orientation cultures (i.e., low masculinity and high femininity) tend to be less outwardly competitive and aggressive when interacting with other team members. They are also more likely to focus on cultivating socio-emotional ties among members and building team cohesion. A focus on socio-emotional ties, to the extent that it engenders the formation of affect-based trust, can facilitate the sharing of new ideas and information (Chua, Morris, & Ingram, 2010), a critical antecedent of team effectiveness.

The effect of relationship orientation on team performance should be especially salient for self-managing multicultural teams because for team members with little in common (because of different cultural backgrounds), but a high degree of autonomy and few predetermined rules and structures to follow (because of the lack of direct supervision by a formal leader), a higher level of interpersonal trust will be required to overcome psychological barriers to building cohesion and group identity (Han & Harms, 2010). A high average level of team relationship orientation can smooth the process of trust building and render idea and information exchange more efficient and effective, resulting in better use of knowledge and expertise within teams (Alper, Tjosvold, & Law, 1998). Hence, we propose that self-managing, multicultural teams with high average levels of relationship orientation that facilitate information sharing and coordination are likely to perform better than teams with low levels of relationship orientation.

Hypothesis 4. Beyond the initial stage of team formation, the higher a self-managing, multicultural team's average level of relationship orientation, the better its performance.

As with the earlier stages of team formation, the degree of variance among team members from cultures with similar levels of relationship orientation matters. If many members are from cultures with similarly high levels of relationship orientation, a multicultural team risks being trapped in groupthink, a process whereby deeply relationship-focused team members strive to minimize conflict and disagreement, resulting in decision making that emphasizes consensus and avoids dissent and critical thinking. Prior research suggests that such decision-making processes compromise team effectiveness (Janis, 1972; Moorhead, Neck, & West, 1998). Conversely, given a high degree of variance in relationship orientation, the extreme case being fragmentation into two opposing factions (Harrison & Klein, 2007), conflicts and disputes are likely to disrupt the effectiveness of a multicultural team. Thus, we expect an inverted U-

shaped relationship between degree of variance in members' relationship orientation and team performance, with better performance accruing to a moderate level of variance. Similarly, we expect the positive effects of low team-level relationship orientation to be boosted by a moderate level of variance in this cultural dimension.

Hypothesis 5. There is an inverted-U curvilinear relationship between the degree of variance among team members' relationship orientation and team performance such that team performance will be better at a moderate, than at a low and high, degree of variance.

Hypothesis 6. There is an interaction between a self-managing multicultural team's average level of relationship orientation and the degree of variance among team members such that the performance of a team with a high average level of relationship orientation is enhanced by a moderate degree of variance among members.

Note that relationship orientation is not likely to have a strong effect on team performance during the initial stages of team formation. When individuals from different cultures are just beginning to become acquainted with one another and form relationships, maintaining harmonious relationships should not be a high priority or concern. Nor do we have any specific hypothesis regarding the role of uncertainty avoidance in the later stages of forming self-managing multicultural teams because its effects depend on the extent to which members are able to reconcile and become comfortable with their cultural differences in the earlier stages of team development. We assume that as members become better acquainted and share more knowledge and understanding about team tasks and work processes, that is, after the forming and storming stages, the levels of uncertainty and anxiety associated with working with people from other cultures should be significantly reduced.

What about the effects on the performance of self-managing, multicultural teams of the other two cultural value dimensions: power distance and individualism–collectivism? We argue that these two dimensions do not have clear theoretical relationships with team performance. Regarding power distance, although Kirkman and Shapiro (1997, 2001b) theorized that teams in high power distance cultures characterized by hierarchical structures and clear lines of authority might resist the concept of self-management, they did not find empirical evidence for this thesis (Kirkman & Shapiro, 1997, 2001a, 2001b). Moreover, in self-managing, multicultural teams with no formal leadership, power distance among members would not be salient given that all members are of equal status. Consequently, we do not expect power distance to have significant impact on individual and team performance.

Findings on the relationship between individualism–collectivism and team effectiveness are mixed. Some research found that teams with a high individualism orientation perform better at creative problem solving (Goncalo & Staw, 2006), whereas other research found that collectivism enhances collaboration and team cohesion and, hence, should have a positive effect on team coordination and effectiveness (Campion, Medsker, & Higgs, 1993; Campion, Papper, & Medsker, 1996; Eby & Dobbins, 1997). Perhaps more important is that recent research has begun to question the conceptual clarity of the individualism–collectivism construct (Brewer & Chen, 2007; Oyserman, Coon, & Kemmelmeier, 2002). For instance, Brewer and Chen (2007), arguing that the conventional conceptualization of individualism–collectivism is unclear about who are the collectives, proposed a distinction between relational collectivism focused on

the collectivistic orientation toward others with whom one has a personalized relationship (e.g., close significant others, family, or important members of one's social network and community) and group collectivism focused on the collectivistic orientation toward others on the basis of depersonalized relationships (i.e., those with whom one is associated on the basis of common membership in ad hoc or symbolic groups). In the case of self-managing multicultural teams, the type of collectivistic orientation espoused would depend on one's culture. East Asian collectivists, for example, are more likely to emphasize relational collectivism, whereas American collectivists are more likely to emphasize group collectivism. Given this new development in the conceptualization of collectivism, and a lack of comprehensive research mapping the types of collectivism dominant in different cultures, we do not present any specific hypotheses regarding how the individualism–collectivism value orientation influences the performance of multicultural teams.

Method

Setting

We organized a cohort of MBA students at a private east coast university in the U.S. and assigned to self-managing teams on which they were required to work for two years across eight required classes. The teams had complete discretion in deciding how to accomplish a variety of tasks including marketing projects, business case write-ups, financial analyses, statistical problem sets, and presentations; and we evaluated them only in terms of the quality of their output. We assigned five to six students to each team on the basis of a formula designed to maximize within-team heterogeneity (with respect to gender, nationality, professional background, and work experience) and minimize between-team heterogeneity to ensure demographic similarity across teams. All teams included members of both genders (1–2 women per team), at least three nationalities, and at least three professional backgrounds. These design considerations provided a methodological control for demographic diversity (e.g., gender), and the even distribution eliminated the need to include such variables as controls in our analyses. We collected data in two waves, at the beginning of team formation and at the end of the fourth month of team formation, a point at which team members had worked on the same teams for three required courses.

Participants

Our study involved 375 MBA students (77 per cent male, mean age = 29.16 years, SD = 2.55) organized into 67 teams. We distributed 59.38 per cent of the participants who were international students (i.e., not U.S. citizens) across Asian countries including China, India, Japan, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand, (27.59 per cent); European countries including Belgium, Czech Republic, Denmark, France, Germany, Israel, Italy, the Netherlands, Portugal, Russia, and the UK (22.02 per cent); South American countries including Argentina, Brazil, and Columbia (5.43 per cent); African countries (1.63 per cent); and Australia (.54 per cent).[22]

[2] We do not have information on our participants' multicultural experiences prior to their participation in our study. However, a comparative sample (i.e., MBA students recruited in the following four semesters after the current sample, N > 1400) showed that only 15% of the population has one year or more oversea work experience and only 13% of the population has one year or more oversea study experience.

Procedures and research materials

We measured team performance on the basis of two unstructured team exercises conducted at different times, the first measurement taken after a marketing plan exercise during orientation. All 67 teams participated in this exercise, which involved developing a marketing plan to promote the business school. Participants met for the first time their team members with whom they were expected to work for the following two years when they assembled for this exercise. Four months later, we assessed the performance of 33 of these teams, all members of which were taking a marketing course with the same instructor, on the basis of their performance for a marketing strategy development assignment. We selected these two performance measures because both tasks (i) were related to marketing strategies; (ii) were unstructured, with minimum guidance regarding how the task should be performed being provided thereby affording team members the degree of autonomy characteristic of a self-managing team; (iii) required problem-solving skills, but could be accomplished by drawing on multiple perspectives such that innovation deriving from the diversified composition of the team could play a role and contribute to team performance; and (iv) were evaluated only on the quality of the output so that team members shared the performance outcomes.

Marketing plan exercise

The marketing plan exercise on which the teams were asked to work on the first day of orientation as a "jump-start" activity involved formulating a marketing plan to promote the business school. The plan was to include two components: (i) a visual component consisting of an A4-size magazine advertisement mock-up and (ii) a verbal component that included a supporting part consisting of a tagline for an advertisement as well as the core message (i.e., three key words) and impact (i.e., a short description) the team wanted the advertisement to deliver. We provided the teams with magazines, colored pencils, scissors, and glue to create the advertisement mock-up and given two hours to complete the exercise.

Two trained evaluators, one Asian and one American, expert in managing multiculturalism and diversity in the workplace independently evaluated the teams' outputs. The evaluators evaluated the visual component of the advertisement mock-up by rating on 5-point Likert scales (1 = not at all and 5 = very much) with the following six statements: (i) "This advertisement is original." (ii) "This advertisement is artistic." (iii) "This advertisement is creative." (iv) "This advertisement is expressive." (v) "This advertisement is imaginative." (vi) "This advertisement is sophisticated." The reliability of the scale was high (Cronbach $\alpha = .81$). The raters then evaluated the marketing plan holistically (taking into account both the visual and supporting verbal components) rating on 5-point Likert scales (1 = not at all and 5 = very much) the following six questions: (i) "How unique is this advertisement (creative and catches your attention)?" (ii) "How memorable is this advertisement (has lasting impact)?" (iii) "How accurate is this advertisement (effectively communicates the marketing plan)?" (iv) "How favorable is your gut reaction toward this advertisement (your intuition or aspects not covered above)?" (v) "To what extent does this advertisement capture the intended image?" (vi) "How much effort is expended in creating this advertisement?" The reliability of the scale was again high (Cronbach $\alpha = .82$), as was inter-rater reliability between the two evaluators on each of the two scales (intra-class correlations [ICC] were .44 and .63 respectively, $p < .01$).

Marketing strategy development assignment

Four months after team formation, we gave the 33 teams, all members of which were taking a marketing course, a group case-analysis assignment based on a Harvard Business School case study. The students were to evaluate the business model of The Medicines Company, founded in 1996, which acquired, developed, and marketed drugs abandoned by other drug companies, and to determine the best pricing

and promotion strategy for the acquired blood-thinning drug Angiomax used in angioplasty procedures. We included a number of discussion questions with the assignment to facilitate the teams' case analysis.

The instructor, who was unaware of the study hypotheses, served as the rater for this assignment. Performance was scored between 0 and 25 on the basis of teams' analyses of the case along five dimensions: (i) ability to consider the customers' perspectives; (ii) ability to consider business collaborators' perspectives; (iii) quality of the pricing strategy; (iv) quality of the marketing strategy; and (v) the presence of new and creative insights in the analysis.

Coding participants' cultural value orientation

We coded participants' cultural value orientations on the basis of Hofstede's cultural dimensions (uncertainty avoidance and relationship orientation, also termed masculinity–femininity) by using the national scores reported on Geert Hofstede's cultural dimensions website (http://www.geert-hofstede.com). We calculated team cultural value orientation scores by aggregating team members' national cultural scores on each cultural dimension. To examine the appropriateness of representing the measure at the team level, we calculated ICC(1), which determines by comparing the within-team and between-team variance of measures how much of the total variance is due to team membership. Bliese (2000) suggested that ICC(1) values between .05 and .20 are acceptable, with values greater than .30 considered outstanding. For instance, James (1982) reported a median ICC(1) of .12 in the context of team climate perception. In our study, the ICC(1) values of uncertainty avoidance and relationship orientation were .12 and .18, respectively. These values justified aggregation of the two value scores from the individual level to the team level of analysis. A higher score on the dimension of uncertainty avoidance indicated a higher average level of team uncertainty avoidance, a higher score on the dimension of masculinity–femininity, a lower average level of team relationship orientation.

Recognizing that Hofstede's culture dimensions were intended for country-level analyses, we proposed that our cultural values measures were valid proxies for team members' beliefs and shared consensus regarding the norms of dominant cultural values after years of enculturation in their own countries.

Results

We first created two team variance scores for uncertainty avoidance and relationship orientation following the diversity formula for calculating demographic diversity adapted from Tsui, Egan, and O'Reilly (1992). Specifically, we computed the difference between any one individual and all other individuals on a team for each culture dimension (i.e., uncertainty avoidance and relationship orientation). The team variance score for each cultural value orientation is the squared root of the summed squared differences between an individual S_i's value on a specific cultural-value dimension and the value on the same variable for every other individual S_j in the sample for the team, divided by the total number of members (n) on the team. The formula used for this computation is as follows:

$$\left[\frac{1}{n}\sum_{j=1}^{n}(S_i - S_j)^2\right]^{1/2}$$

To test our hypotheses of the curvilinear effect of team cultural diversity, we mean-centered the newly created team variance scores and squared the scores to represent the quadratic effect of team variance in each given value orientation. We also created two interaction terms involving the team average cultural

value orientation scores and squared team variance scores for uncertainty avoidance and relationship orientation. We controlled gender heterogeneity (the gender composition of teams) in all the analyses, as values of relationship orientation were originally derived from gender differences. Female being the gender minority group across all teams (each team had 1–2 women among 5–6 team members total), we calculated gender heterogeneity by dividing the percentage of female members on a team by 0.5 (indicating equal numbers of both genders in teams' gender composition, the highest level of gender heterogeneity). We present the correlations of key variables in Table 1.

Table 1. Correlations between team variables.

	1	2	3	4	5	6	7
1. Gender heterogeneity	1						
2. Team average uncertainty avoidance	.00	1					
3. Team average relationship orientation	−.03	.09	1				
4. Team variance in uncertainty avoidance	.13	.37**	−.07	1			
5. Team variance in relationship orientation	−.13	.24*	.14	.26*	1		
6. Performance in visual component	.10	−.20†	−.01	−.19	−.10	1	
7. Overall evaluation of marketing plan exercise	.22	−.31**	−.01	−.22†	−.12	.57***	1
8. Performance in marketing strategy analysis assignment	−.31†	−.16	.34†	−.13	.10	.21	.24

Note: $N = 67$ for Variables 1–7. $N = 33$ for Variable 8.
†$p < .10$;
*$p < .05$;
**$p < .01$;
***$p < .001$.

Performance in marketing plan exercise (Time 1)

Visual component of advertisement mock-up

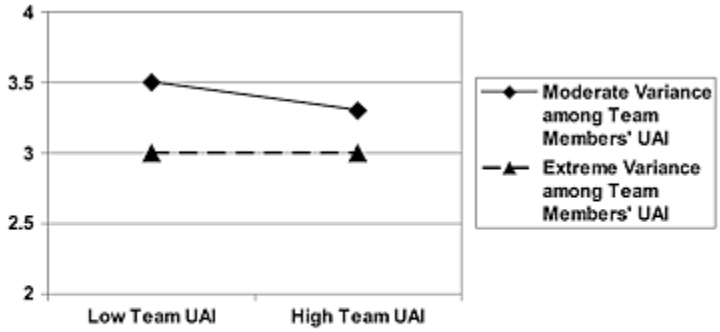
To test our first set of hypotheses (H1a, H1b, and H1c), we regressed the teams' performance scores for the visual component of the marketing plan (i.e., the advertisement mock-up) on two mean-centered cultural value orientation scores (uncertainty avoidance and relationship orientation), two squared, mean-centered team diversity scores (following Aiken and West's (1991) suggestions), and two interaction terms of average cultural value orientation score and squared team variance score, controlling for gender heterogeneity. The results (reported in Table 2) indicated that among all predictors, only the interaction of team average uncertainty avoidance and squared team variance in uncertainty avoidance predicted team performance for the visual component of the advertisement mock-up, $\beta = -.54$, $p = .015$. The overall model was not significant, $F(7, 60) = 1.45$, $p = .202$. We then removed team average relationship orientation, squared team variance in relationship orientation, and the interaction of team average relationship orientation and squared team variance in relationship orientation from the model. The results showed team average avoidance to marginally predict team performance, $\beta = -.20$, $p = .10$, whereas the interaction of team average uncertainty avoidance and squared team variance in uncertainty avoidance significantly predicted team performance, $\beta = -.52$, $p = .014$. The negative coefficient here suggests an inverted-U curvilinear effect for team cultural diversity. The overall model was significant, $F(4, 63) = 2.60$, $p = .045$. Thus, as predicted by H1a, teams with lower average levels of uncertainty avoidance exhibit better performance than teams with higher levels of uncertainty performance. Furthermore, teams with lower average levels of uncertainty avoidance and moderate levels of variance in team uncertainty avoidance performed best, as predicted by H1c (Figure 1). The curvilinear effect of team variance in uncertainty avoidance did not predict team performance. Thus, H1b was not supported.

Table 2. Regression model results in marketing plan exercise.

	Visual component		Overall evaluation	
	Model 1	Model 2	Model 1	Model 2
Block 1				
Gender heterogeneity	0.096	0.096	0.218	0.218
ΔR^2	.009	.009	.047	.047
Block 2				
Team average uncertainty avoidance	−0.202	−0.198†	−0.281	−0.282†
Team average relationship orientation	−0.032		0.016	
ΔR^2	.040	.040	.078	.078
Block 3				
Squared team variance in uncertainty avoidance	−0.078	−0.657	−0.247	−0.226
Squared team variance in relationship orientation	−0.024		0.060	
ΔR^2	.006	.006	.054	.049
Block 4				
Interaction of Team average uncertainty avoidance × Squared team Variance in uncertainty avoidance	−0.540*	−0.520*	−0.552*	−0.545*
Interaction of team average relationship orientation and squared team Variance in relationship orientation	0.078		0.039	
ΔR^2	.089	.087	.144	.147
Model (R^2)	0.145	0.141	0.309	0.268
F	1.45	2.60	1.78	3.424
P	0.202	0.045	0.135	0.021

Note: $N = 67$.
†$p < .10$;
*$p < .05$.

Figure 1: Interaction effect of team uncertainty avoidance score (team UAI) and squared team diversity in uncertainty avoidance on the team's performance in the visual part of the marketing plan.

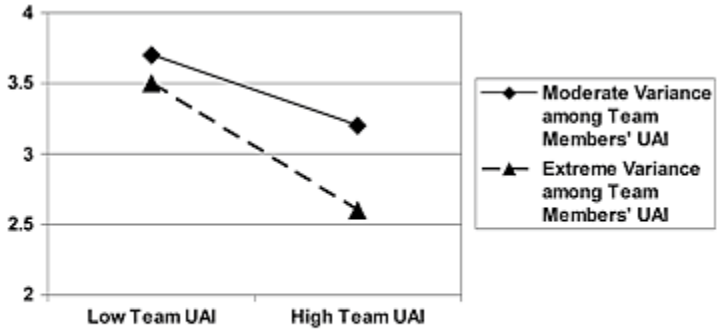


Note. The interaction effect was plotted following Aiken and West's (1991) suggestion: high team UAI (+1SD) and low team UAI (-1SD); high squared team UAI diversity (+1SD) and low squared team UAI diversity (-1SD).

Overall evaluation of performance in the marketing plan exercise

We regressed the teams' overall evaluation scores on the two mean-centered cultural value orientation scores, two mean-centered team variance scores, and two interaction terms of cultural value orientation score and team variance score, controlling for gender heterogeneity. The results (reported in Table 2) indicated that among all predictors, only the interaction of team uncertainty avoidance and squared team variance in uncertainty avoidance significantly predicted teams' overall performance, $\beta = -.552$, $p = .041$, but the overall model was not significant, $F(7, 60) = 1.78$, $p = .135$. We next removed team relationship orientation, team variance in relationship orientation, and the interaction of team relationship orientation and team variance in relationship orientation from the model. The results indicated that team uncertainty avoidance marginally ($\beta = -.282$, $p = .10$), and the interaction of team uncertainty avoidance and squared team variance in uncertainty avoidance significantly ($\beta = -.545$, $p = .018$), predicted overall team performance. The model was significant, $F(4, 63) = 3.42$, $p = .021$. Hence, consistent with our prediction in H1a, teams with a low average level of uncertainty avoidance performed better than teams with a high average level of uncertainty performance. Furthermore, as predicted in H1c, squared team variance in uncertainty avoidance moderated the main effect of team uncertainty avoidance on the overall evaluation of team performance (Figure 2). The squared team variance in uncertainty avoidance term did not predict team performance, thus H1b was again not supported.

Figure 2. Interaction effect of team uncertainty avoidance score (team UAI) and squared team diversity in uncertainty avoidance on the team's performance in the overall evaluation of the marketing plan.



Note. The interaction effect was plotted following Aiken and West's (1991) suggestion: high team UAI (+1SD) and low team UAI (-1SD); high squared team UAI diversity (+1SD) and low squared team UAI diversity (-1SD).

Performance in the marketing strategy development assignment (Time 2)

To test our second set of hypotheses regarding performance four months after team formation, we regressed the ratings of teams' performance in the marketing strategy development assignment with two mean-centered cultural value orientation scores, two squared, mean-centered team variance scores, and two interaction terms, controlling for gender composition. Table 3 presents the regression results. We found that among all predictors, the average team relationship-orientation score and squared team variance in relationship-orientation score significantly predicted team performance in the marketing strategy development assignment, $\beta = .344$, $p = .042$ and $\beta = -.421$, $p = .01$, respectively. The negative coefficient for the squared team variance indicates an inverted U-shaped curvilinear effect. In addition, gender composition marginally predicted team performance, $\beta = -.302$, $p = .08$. The overall model was significant, $F(7, 26) = 3.02$, $p = .019$. When we dropped team uncertainty avoidance, squared team variance in uncertainty avoidance, and interaction of team uncertainty avoidance and squared team

variance in uncertainty avoidance from the model, the results showed average team relationship orientation and squared team variance in relationship orientation to significantly predict team performance, $\beta = .349$, $p = .036$ and $\beta = -.444$, $p = .008$, respectively. The overall model was significant, $F(4, 29) = 4.60$, $p = .005$. Hence, as predicted, higher team average relationship orientation and a moderate level of team variance in relationship orientation were associated with better team performance in the later stage of team formation, supporting H2a and H2b. Squared team variance in relationship orientation, however, did not moderate the main effect of team relationship orientation on team performance, Hence, H2c was not supported.[33]

Table 3: Regression model results in case-analysis assignment.

	Model 1	Model 2
Block 1		
Gender heterogeneity	−0.302†	−0.302†
ΔR^2	.091	.091
Block 2		
Team average uncertainty avoidance	−0.082	
Team average relationship orientation	0.344*	0.349*
ΔR^2	.128	.122
Block 3		
Squared team variance in uncertainty avoidance	0.221	
Squared team variance in relationship orientation	−0.421*	−0.444**
ΔR^2	.199	.165
Block 4		
Interaction of Team average uncertainty avoidance × Squared team Variance in uncertainty avoidance	−0.082	
Interaction of Team average relationship orientation × Squared team Variance in relationship orientation	−0.238	−0.130
ΔR^2	.029	.010
Model (R^2)	0.448	0.388
F	3.02	4.60
P	0.019	0.005

Note: $N = 33$.
†$p < .10$;
*$p < .05$;
**$p < .01$.

Discussion

Although both self-managing and multicultural teams have become prevalent in global work settings, these two types of teams have been studied separately by team researchers (e.g., Cohen et al., 1996; Kirkman & Shapiro, 1997, 2001a, 2001b; Matveev & Nelson, 2004). The team processes and effectiveness of self-managing and multicultural teams in their combined form cannot be predicted by existing team theories and in fact remain empirically unexplored. Drawing on research on cultural value

[3] We have also examined the main effects of mean level, team diversity, and the interaction effect of mean level and team diversity of individualism–collectivism and power distance, respectively, on Times 1 and 2 team performance scores. The result revealed no significant effects at all.

orientation and team diversity, this study shows that the performance of self-managing, multicultural teams can be enhanced by the appropriate combination of cultural value orientations. At the initial stages of team formation, self-managing, multicultural teams with a lower average level of uncertainty avoidance performed better. This effect is most pronounced when the degree of variance among team members' uncertainty avoidance is moderate. At later stages of team development, however, we found that teams' uncertainty avoidance ceased to exert any significant effect on performance. Rather, it was teams' relationship orientation that mattered. We found that teams with a high average level were more effective than teams with a low average level of relationship orientation. Furthermore, teams with moderate degrees of variance in relationship orientation among members performed better than teams with low or high within-team variance along this cultural value dimension. Contrary to our prediction (H2c), however, we did not find a significant interaction between a high average level of team relationship orientation and moderate variance in team members' relationship orientation. Overall, our findings paint a nuanced picture of how different types of cultural value orientation in self-managing, multicultural teams shape performance at different stages of team formation.

Theoretical implications

This research makes several theoretical contributions. It is the first research to directly investigate the dynamics and development over time of self-managing, multicultural teams. Such teams face unique challenges that need to be more carefully investigated. In examining specific compositions of cultural value orientations and conceptualizing cultural orientations as inter-subjective perceptions of cultures, our research takes a first step toward theory development around this type of teams. Our findings also suggest promising ways specific compositions of cultural orientations can compensate for the lack of formal leadership and shared cultural norms in self-managing, multicultural teams. Leaders are usually key to helping culturally diverse teams overcome major barriers such as differences in communication styles and decision-making norms (Brett et al., 2006). Our results suggest that such challenges can be addressed, in part, by the appropriate combination of perceived shared behavioral norms and practices within teams.

Also noteworthy are our findings that different cultural value orientations exert differential influences on team performance over the trajectory of team development, advancing the literature on cultural diversity and team composition. Whereas past research provided evidence that cultural diversity, by enhancing information exchange and reducing vulnerability to stereotypes and mind guard, improves team decision making and team performance (Moscovici, 1976; Sommers, 2006), our findings suggest that it is not sufficient to define diversity only in terms of the mean or variance along a given dimension of team composition but that it is important to take both into account as well as their interaction effect.

Moreover, whereas the conventional research approach tends to view the effect of cultural diversity on team performance as static, we propose a more dynamic perspective that captures the ideal team composition of cultural orientations in response to changing challenges along the successive stages of team development. Prior research has yielded inconsistent findings on whether the effects of diversity become stronger or weaker over time (van Knippenberg & Schippers, 2007). Our research suggests that it is perhaps not time per se but a combination of the specific stage of team formation and content of the diversity that matters.

In addition, our finding that the degree of diversity along a given cultural value dimension can influence its effect on team performance also extends current understanding of how team diversity affects team performance. Specifically, we found the combination of a low average level of uncertainty and moderate variance among team members' uncertainty avoidance to best predict team performance in the initial

stages of team formation, and moderate variance among team members' relationship orientation to better predict term performance in later stages of team formation. These findings are consistent with arguments that some requisite degree of diversity is essential to effective team performance (Gray, 2000). Drawing on cybernetics theories, Ashby argued that a control system cannot respond optimally to environmental stimuli when the variety in the stimuli is greater than the variety in the system's internal set of responses. Applying this principle to knowledge management in teams, scholars found that increases in the variety of team knowledge had a positive effect on problem analysis but only up to a certain level (Blackburn, 1971; Gray, 2000). Some degree of knowledge variety is evidently crucial to team success, but too much can precipitate information overload and confusion. The literature on self-managing teams has similarly argued that such teams tend to emerge with high levels of cohesiveness over time (Barker, 1993; Goodman, Devadas, & Hughson, 1988; Lawler, 1986; Manz & Neck, 1995; Manz & Sims, 1993). But excessive trust among team members can impair self-managing teams' decision making (e.g., Moorhead et al., 1998) and performance (e.g., Langfred, 2004, 2007).

Furthermore, although this research focused on the dynamics in self-managing, multicultural teams, our findings can also inform other areas of team research, for example, those that examine teams with unstable membership (Birnbaum, 1977; Chandler, Honig, & Wiklund, 2005; Hirst, 2009). When membership is in constant flux, with members entering and leaving frequently, team members are perpetually dealing with unfamiliar others; and the team remains stuck, for the most part, in the forming and storming stage. Our research suggests that members' degree of uncertainty avoidance would be especially predictive of the performance of such teams. Team members' relationship orientation, by comparison, would be less important because members of teams with unstable membership might have neither the opportunity nor the motivation to maintain long-term, harmonious relationships with one another.

Our finding that a moderate degree of variance in team's relationship orientation has a more positive effect on performance than low and high degrees of diversity also sheds light on the dynamics of leaderless teams. Prior research has shown that informal leadership often emerges in teams that have no formal designated leaders (Bales, 1950; Hollander, 1961; Lord, 1977; Taggar, Hackett, & Saha, 1999). Research as early as Bales's (1950) and Hollander's (1961) showed that effective informal leaders of self-managing teams tend to exhibit two distinct sets of behaviors: task oriented and relationship oriented. Because it is not always possible for a given individual to be adept at both types of leadership behaviors, two informal leaders (each taking a different role) sometimes emerge to jointly help a team achieve its overall goals. Consistent with these findings, our finding regarding the beneficial effects of moderate variance among team members' relationship orientation suggests that a good mix of task and relationship orientation within a leaderless team might be an essential condition for being able to draw on different types of informal leadership behaviors among team members. Pushing this argument further, we speculate that in highly unstructured or amorphous teams (e.g., leaderless, fluid membership, no clear boundaries), maintaining a moderate level of requisite diversity (Ashby 1956; West, 2000) might be a good design principle.

Finally, the lack of support for H2c merits some discussion. This finding suggests that, perhaps unlike the effect of uncertainty avoidance during the initial stages of team formation, average levels of team relationship orientation and degree of variance in team members' relationship orientation work in different ways to influence the performance of self-managing, multicultural teams. For example, whereas an average level of team relationship orientation might influence trust and relationship building, variance in team relationship orientation influences members' work styles and information management. As a result, the two variables do not interact to exhibit a joint influence on team performance. Another

explanation for this unexpected result could be that the sample size was too small to provide sufficient statistical power to examine this effect. Due in part to the smaller sample size of 33 teams in the second wave of data collection, the distribution of the interaction between an average level of relationship orientation and variance in members' relationship orientation on teams' performance is highly positively skewed (skewness = 3.35) and narrowly distributed (kurtosis = 15.78). Lack of variance in this variable might have contributed to this non-significant result.

Practical implications

Global work calls for multicultural collaboration, at times without close direct supervision or formal leadership, either because of the nature of the work (e.g., close supervision can undermine creativity) or because the work processes are globally distributed (e.g., O'Leary & Mortensen, 2010). This research has practical implications for self-managing, multicultural teams as well as for team processes generally. In terms of team composition, it is useful to think about cultural diversity along specific cultural value dimensions, as opposed to cultural diversity such as nationality in general (i.e., deep level as opposed to surface level). Members with low uncertainty avoidance in the presence of sufficient variation among members' uncertainty avoidance value orientation could be selected to facilitate the team formation process, especially in the case of self-managing, multicultural teams required to perform immediately such as those rescue teams formed by various professionals from all over the world for the earthquake and tsunami relief work in Japan. Because these ad hoc teams are often short-lived, relationship orientation is a less important consideration.

In addition to the selection of members with suggested levels of uncertainty avoidance for the success of the early stages of team formation or of teams with short-term, unstable membership, further criteria could be applied for member selection in teams with long-term and stable membership. Specifically, selecting individuals with high relationship orientation could help to smooth team processes including coordination and innovation behaviors. Team members could also be trained and prepared in advance to enhance their own relationship orientation for future participation in a self-managing, multicultural team. These practices would be especially important in the case of self-managing, multicultural teams designed for long-term projects and teams-assigned tasks that are not clearly defined and require more coordination and interdependence among team members.

Of course, it is not always applicable to assemble teams with the perfect composition to fully reap the benefits of self-managing multicultural teams. Yet, our findings are still sensible in highlighting the important team dynamics and challenges at different stages of team formation. Managers can therefore draw on our insights to design other interventions to improve team performance. For example, cultural sensitivity training and preparation aimed at reducing individuals' uncertainty avoidance could be offered to members before they join these self-managing multicultural teams to ensure high performance during the early stages of team formation. Ample opportunities could also be provided for personal interaction and socio-emotional bonding to build personal relationships and trust among members of self-managing, multicultural teams.

Limitations and future research

As with all research, this study has limitations. First, we used MBA student teams as our data sample. Studying student teams inevitably restricted our understanding of how self-managing, multicultural teams

respond to real-world organizational requirements as well as to unpredictable external demands from the market, clients, and competitors. There are, however, some advantages to using MBA student teams. For example, the MBA teams were truly self-managing and multicultural because the cultural, gender, and functional diversities were specifically designed into the teams for purposes of learning and training in the MBA program. Also, performance across teams was highly comparable because the teams worked on identical tasks and were subject to the same evaluation standards. In comparison, teams in real-world organizations, being less neatly designed, might be subject to more "noise" that might blur the studied phenomenon biasing conclusions. In fact, using MBA students as samples of self-managing and multicultural teams is both justified and common in team research (Boros, Meslec, Curseu, & Emons, 2010; Langfred, 2004, 2007). We thus believe that the standardized nature of student teams provides a valuable context in which to test our theories regarding the processes and outcomes of self-managing, multicultural teams, especially at the stage of developing and investigating new, unexamined theories. Future research should, of course, seek to replicate these findings in organizational settings.

Second, we used Hofstede's national scores of uncertainty avoidance and relationship orientation as proxies for team members' consensus on cultural values, adopting the new theory and findings of Zou et al. (2009). The advantage of using Hofstede's national scores is that self-reported cultural value scores could be biased because of social desirability considerations and defective self-perceptions (Ones, Viswesvaran, & Reiss, 1996). Moreover, individuals might not always be aware of their own cultural tendencies, and self-reported cultural tendencies (or shared cultural tendencies) could be strongly influenced by the contexts in which individuals are situated at the moment. It is also possible that Hofstede's national scores are better estimators of individuals' beliefs with respect to shared cultural tendencies across time and contexts. We nevertheless believe it to be important that individuals' subjective perceptions of their cultural values as well as perceptions of shared cultural values in teams be taken into account when investigating the relationship between cultural values and team performance, especially at later stages of team formation, when team members might have developed a set of shared values and norms. Future research should further investigate the relationship between team members' self-reported personal cultural values and perceived shared cultural values and team performance.

Third, one might argue that because the effect of relationship orientation is manifested only in the later stages of team formation, members' relationship orientation, as reflected in national cultural values, may be too distal and unable to capture the true beliefs and shared norms in teams' relationship orientation after a sufficient amount of interaction among team members. We believe that, even though its effect is manifested only in the later stages of team formation, the influence of members' relationship orientation on shaping and building teams' norms and beliefs in relationship orientation begins, like the value orientation of uncertainty avoidance, during the initial stages of team formation. Unlike the effect of uncertainty avoidance on self-managing, multicultural teams, the effect of relationship orientation takes time to incubate and accumulate before it begins to influence team processes and outcomes. Future research needs to further examine the effect of relationship orientation along the different stages of team development.

Fourth, although we predicted and found support for the benefits of having moderate cultural diversity in teams on team performance, the mechanisms we proposed for less ideal team performance caused by low and high cultural diversity in teams are in fact different. We proposed that in early stages of team formation, low variance in uncertainty avoidance when the teams have a low mean level of uncertainty avoidance might lead to a lack of structure in team processes and too much risk taking in team decision making. In contrast, high diversity in uncertainty avoidance might cause factions in teams because of distinctive and incongruent attitudes toward risk taking and need for structure among team members.

Comparatively, in later stages of team formation, low variance in relationship orientation when the teams have a high mean level of relationship orientation could create group think because of common emphasis on team harmony and relationship. However, high variance in relationship orientation could produce factions in teams because of the pursuit of inconsistent goals (i.e., harmony/relationship versus efficiency/task fulfillment). These different mechanisms were not directly investigated in this study and should be examined in the future research.

Fifth, our data for the second team task involved only 33 of the 67 teams examined at the beginning of the study. This raises the question of whether there might have been biases in the exclusion of certain teams in the second wave of data collection that could confound our findings. We believe this to be unlikely because the 34 teams absent from our second wave of data collection were excluded because of a limitation in accessing their performance measures, which was unrelated to specific team characteristics. Also, we wanted the performance evaluation to come from the same instructor to ensure comparability. A comparison of selected and excluded teams revealed no systematic difference whatsoever. Although the smaller sample size in the second wave of data was not ideal, that we were able to find some of the predicted effects is indicative of their robustness. Nevertheless, future research should be conducted with a larger and more representative sample to replicate our findings and further investigate the unsupported prediction regarding the interaction effect between team average level of relationship orientation and variance in teams' relationship orientation.

Conclusions

Situated at the intersection of research on multicultural and self-managing teams, this research provides the first empirical evidence that the influence of cultural value orientation, construed as shared cultural norms and beliefs, on the effectiveness of self-managing, multicultural teams varies with type of cultural value and stage of team development. By investigating optimal teams' compositional configuration of members' cultural value orientations, our research sheds light on the underlying processes used by self-managing, multicultural teams. We believe that our study opens up new directions for future research on self-managing, multicultural teams and teams that exhibit similar features and characteristics.

Biographies

Chi-Ying Cheng is an assistant professor of psychology at the Singapore Management University. She received her PhD in organizational psychology from the University of Michigan. Her research examines the underlying psychological mechanisms and behavioral outcomes of dual identity integration with special focus on culture. She also investigates the influence of multiculturalism on organizational outcomes such as creativity and team performance.

Roy Y. J. Chua is an assistant professor in the organizational behavior unit at Harvard Business School. Roy's research draws on human psychology in an effort to understand important social processes in business organizations. In his primary stream of research, he studies how multicultural interactions in a globalized workplace influence creativity and innovation. Does multiculturalism at the workplace facilitate or inhibit creative performance? What are the key determinants and how can managers better harness a multicultural workforce for greater creative breakthroughs? Roy also has a keen interest in

understanding Chinese organizational behavior and management processes and more specifically social networking dynamics in China.

Michael W. Morris is a professor at Columbia University in the Business School and the Psychology Department. Previously, he worked at Stanford University and at universities in China, Japan, Korea, and Spain. His research examines cultural differences in the conceptions of agency that shape attributions of causality and responsibility.

Leonard Lee is an associate professor of marketing at Columbia University in the Business School. His research focuses on investigating why and how consumers shop in real-world environments, and how experiential factors affect their shopping behavior. He is also interested in understanding how emotional and cognitive factors influence consumer judgments and decision making.

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